

SECTION V—USE OF ASSESSMENT RESULTS TO IMPROVE CANDIDATE AND PROGRAM PERFORMANCE

Evidence must be presented in this section that assessment results have been analyzed and have been or will be used to improve candidate performance and strengthen the program. This description should not link improvements to individual assessments but, rather, it should summarize principal findings from the evidence, the faculty's interpretation of those findings, and changes made in (or planned for) the program as a result. Describe the steps program faculty has taken to use information from assessments for improvement of both candidate performance and the program. **This information should be organized around (1) content knowledge, (2) professional and pedagogical knowledge, skill, and dispositions, and (3) student learning.**

(response limited to 3 pages)

Content Knowledge

Keene State College has a rigorous and comprehensive science program for science education majors. Candidates are required to graduate with a science major in their fields of licensure (Biology, B.S.; Chemistry, B.A.; Geology (Earth/Space), B.S.; General Science, B.A.; or Chemistry/Physics (Physical Science), B.S. Candidates attend the same classes as the science content majors. Most instructors do not know which students in their classes are also education candidates. Science education candidates are not able to obtain their undergraduate degree and complete the coursework required to receive New Hampshire certification in four years. Most candidates attend KSC for a minimum of five years to obtain their science degree and NH certification (licensure).

Although all of the candidates that have completed the program have passed the Praxis II and met the GPA requirements of the program, there is always room for improvement in the programs. Candidates have had to retake the Praxis II to pass. Plans have been made to include Praxis II content knowledge questions on a regular basis in the Science Methods classes. Exposure to the questions will increase confidence in candidates and hopefully increase the number of candidates that pass the exam the first time that they take it.

Other areas of improvement for content knowledge would be for the Science Methods instructor (also their advisor) to encourage candidates that they need to not just focus on their major courses, but also on their supporting coursework. For example, the Chemistry candidate did not do as well in the Biology coursework as he did in the Chemistry courses. Although this might be typical, it is important for the candidates to understand the importance of all of their courses and that many times they are asked to teach a course outside of their field of licensure in subjects that have been classified as Critical Shortage areas (Physics, General Science, Physical Science).

Keene State College is going through two major changes. The first is a conversion from three to four credit programs. The second is a complete overhaul of the General Education Requirements. Instead of General Education Requirements, the College Senate in May 2006 approved an Integrative Studies program. This has greatly affected the whole campus, including the Secondary Education programs.

In light of the two major changes above, and listening to evaluations of previous graduates in the secondary education program, the program has been totally revamped and will be in effect for the 2007-2008 academic year. One of the main changes in the program is that candidates will not only receive a degree in their science content field, but they will also receive a B.S. degree in education. The second major change is that secondary education students took many of their courses with elementary education majors. Because there are more elementary education majors than secondary, most of the classes emphasize elementary issues and concerns. In the new Secondary education program, only the first Foundations course is taken with elementary candidates. The remaining courses are specifically geared to secondary education majors. The new courses are listed below and show a real shift in ideology. The Curriculum in a Diverse World addresses the importance of diversity, a challenging concern at our college. Instead of the present Methods class and Field Experience (6 credits), there will be two Methods class (8 credits) with includes field experience. A Special Education classes was added as many states are now requiring this background.

EDSEC 221 Curriculum for a Diverse World Prerequisite: Admission to teacher Education program	4 credits
EDSEC 321 Secondary Methods I	4 credits.
EDSEC 322 Secondary Classroom Management Co-requisite or prerequisite: EDSEC 321	2 credits
EDSEC 323 Special Education Issues Co-requisite or prerequisite: EDSEC 321	2 credits
EDSEC 421 Secondary Methods II Prerequisite: EDSEC 301	4 credits
EDSEC 422 Educational Theories/Trends Co-requisite or prerequisite: EDSEC 421	4 credits
EDSEC 425 Student Teaching	12 credits

The unit is presently designing a dispositions form to evaluate candidates' ability to have the positive attributes required in teaching.

Professional and Pedagogical knowledge, skill, and dispositions

Inquiry is of major importance in science teaching pedagogy. It permeates the NSES, NSTA and our New Hampshire Science Frameworks. The candidates have the background and knowledge to conduct research. They have shown that they can pass that knowledge onto their perspective students. In both the Methods courses and in their Student Teaching, they must develop and teach inquiry-based instruction. However, most of the inquiry instruction up to this point has been guided-inquiry. The candidate comes up with the problem and the students must design, carry out, analyze the data, and make conclusions on their experiments. The goal of the program would be for the candidates to

conduct a lesson on a topic and guide the students for come up with their own problems...a true inquiry experience.

Keene State College as a unit is in the process of developing a dispositions rubric that will be used by Methods instructors, Student Teacher supervisors, Cooperating Teachers, and Education instructors that will measure candidate's dispositions. This is a critical area that is not presently being addressed in the KSC Clinical Observation Form (Assessment #4).

Student Learning

The majors provide the candidates with a strong content background, which is a good reflection on the program. Assessment #5, Oral Presentation of Student Learning, is used to measure how effective the candidates can pass on their knowledge to their students. The program demonstrates strength in student learning in inquiry, the nature of science, and unifying themes and concepts, use and importance of technology, all based on the National Science Education Standards, which are highly emphasized in the Science Methods classes and during their Student Teaching experiences.

The candidates felt that more time needs to be spent on developing their skills in using the human/institutional resources of the community to facilitate learning of science in the classroom and field. They also felt that more attention could be placed on developing lessons that are not inquiry-based, but which requires students to analyze problems, including considerations of risks, costs, and benefits of alternative solutions and relating these to the lives of the students.